DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2003–NM–05–AD; Amendment 39–13412; AD 2003–26–13]

RIN 2120–AA64

Airworthiness Directives; Boeing Model 747 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 747 series airplanes, that requires identification of the valves installed on the engine struts as hydraulic supply (fire) shutoff valves for the engine-driven pump, corrective action if necessary, and eventual replacement of discrepant valves with serviceable parts. This action is necessary to prevent leakage of hydraulic (flammable) fluid into an engine fire, which could result in an uncontrolled fire. This action is intended to address the identified unsafe condition.

DATES: Effective February 11, 2004.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of February 11, 2004.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124–2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Kenneth W. Frey, Aerospace Engineer, Systems and Equipment Branch, ANM–130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055–4056; telephone (425) 917–6468; fax (425) 917–6590.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Boeing Model 747 series airplanes was published in the **Federal Register** on April 16, 2003 (68 FR 18565). That action proposed to require identification of the valves installed on the engine struts as hydraulic supply (fire) shutoff valves for the engine-driven pump, corrective action if necessary, and eventual replacement of discrepant valves with serviceable parts.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Support for Proposed AD

Two commenters support the proposed AD.

Request To Add Certain Part Numbers (P/N) for Valve Replacement

One commenter requests that the proposed AD be revised to include hydraulic supply (fire) shutoff valves, P/Ns 10–3200–1 and 10–3200–2. The commenter states that these additional valves are not manufactured by Circle Seal and should be acceptable replacements. This would provide operators with more options when replacing a discrepant Circle Seal valve.

The FAA agrees. Boeing maintenance drawings permit installation of valve P/Ns 10–3200–1 and 10–3200–2, and Boeing has agreed that those parts are acceptable for replacement of the discrepant Circle Seal valves. In addition, we have determined that those valves do not have the identified unsafe condition. Therefore, we have revised paragraphs (b)(1)(ii) and (b)(3) of this final rule to include valves, P/Ns 10–3200–1 and 10–3200–2, as acceptable replacements for the discrepant Circle Seal valves. Operators should note that Boeing did not include those valves in Boeing Alert Service Bulletin 747–29A2102, dated June 29, 2000 (which was referenced in the proposed AD as the appropriate source of service information for the inspection and corrective actions), because they are easily damaged by improper engine shut down procedures. Such damage necessitates unscheduled replacement of the valves with serviceable valves of the same design or modified valves having design features, which help prevent such damage. These design features were incorporated in valve P/Ns 10–3200–3 and 10–3200–5 (specified in the service bulletin and proposed AD as the appropriate P/N for the replacement valve).

Request To Allow Repetitive Valve Tests Instead of Terminating Replacement

The same commenter requests that the proposed AD be revised to allow operators to continue performing the hydraulic supply (fire) shutoff valve test after four years from valve identification date. The commenter asserts that operational valve replacement should not have a mandatory replacement timetable of four years, and that the option to replace or continue repetitive testing should be left up to the operator to decide.

We do not agree. The Circle Seal valves having P/N S270T010–3 have a known design defect. The failure mode in these valves is not a function of time or number of flight cycles. We can better ensure long-term continued operational safety by modifications or design changes to remove the source of the problem, rather than by repetitive inspections/testing. Long-term inspections/testing may not provide the degree of safety necessary for the transport airplane fleet. This, coupled with a better understanding of the human factors associated with numerous repetitive inspections, has led us to consider placing less emphasis on special procedures and more emphasis on design improvements. No change to the final rule is necessary in this regard.

Request To Revise Paragraph (b)(1)(ii) of Proposed AD

Another commenter, the airplane manufacturer, requests that we revise paragraph (b)(1)(ii) of the proposed AD. The commenter states that paragraph (b)(1)(ii) of the proposed AD does not allow replacement of an inoperative valve with a valve, P/N S270T010–3, because that paragraph only refers to paragraph 3.I. of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–29A2102. However, paragraph (c) of the proposed AD specifies that a valve, P/N S270T010–3, may be installed if requirements of the AD are accomplished.

We agree. It was our intention to allow a valve, P/N S270T010–3, to be installed if a P/N 10–3200–3 or 10–3200–5 is not available and to allow the valve to remain installed (until replacement per paragraph (b)(3) of the AD) as long as it continues to pass the repetitive hydraulic supply (fire) shutoff valve test, per paragraph 3.J. of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–29A2102. Therefore, we have revised paragraph (b)(1)(ii) of this final rule to allow operators to install a valve, P/N S270T010–3, as a replacement as long as the repeated testing is performed per paragraph 3.J. of the service bulletin in accordance with paragraph (b)(2) of this final rule.

Request To Revise Preamble and Paragraph (e) of Proposed AD

The same commenter requests that we make the following changes to the preamble and paragraph (e) of the proposed AD:

• In the ''Discussion'' section in the preamble of the proposed AD, identify the model for which the reports indicating malfunctioning valves were received and on which the failure mode was discovered during production testing as Boeing Model 737, 757, and 767 series airplanes, not Model 747 series airplanes. The commenter explains that no reports were received on Model 747 airplanes.

• In paragraph (e) of the proposed AD, omit the duplicate reference to the ''sections.''

We partially agree with the commenter's requests:

• We agree that the models for which the original malfunctioning valve reports on which the failure mode was discovered were Model 737, 757, and 767 series airplanes—not Model 747 series airplanes. However, the ''Discussion'' section is not restated in this final rule, and, therefore, no change to the final rule is necessary in this regard.

• We do not agree that the second reference to the ''sections'' in paragraph (e) of the proposed AD has been duplicated. The parenthetical reference to sections 21.197 and 21.199 of the Federal Aviation Regulations provides the full Code of Federal Regulations citation for those sections, which is the legal citation. No change to the final rule is necessary in this regard.

Explanation of Change Made to the Cost Impact Section of the Final Rule

Because the cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD, we have revised the Cost Impact section of this final rule to specify an estimate of four work hours for the valve replacement instead of the estimated six work hours specified in the proposed rule for that action. The six work hours specified in the proposed rule included incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions. Those costs are not typically included in AD rulemaking actions.

Conclusion

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Changes to 14 CFR Part 39/Effect on the AD

On July 10, 2002, the FAA issued a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's airworthiness directives system. The regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. However, for clarity and consistency in this final rule, we have retained the language of the NPRM regarding that material.

Change to Labor Rate

We have reviewed the figures we have used over the past several years to calculate AD costs to operators. To account for various inflationary costs in the airline industry, we find it necessary to increase the labor rate used in these calculations from $60 per work hour to $65 per work hour. The cost impact information, below, reflects this increase in the specified hourly labor rate.

Cost Impact

There are approximately 681 airplanes of the affected design in the worldwide fleet. The FAA estimates that 130 airplanes of U.S. registry will be affected by this AD, that it will take approximately 1 work hour per airplane to identify the valve, and that the average labor rate is $65 per work hour. Based on these figures, the cost impact of the AD on U.S. operators is estimated to be $8,450, or $65 per airplane.

The cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Replacing a valve, if required, will take approximately 4 work hours, at an average labor rate of $65 per work hour. Required parts and hydraulic fluid will cost approximately $4,438 per valve. Based on these figures, the cost impact of replacing a valve is estimated to be $4,698.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption **ADDRESSES.**

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

■ Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. Section 39.13 is amended by adding the following new airworthiness directive:

2003–26–13 Boeing: Amendment 39–13412. Docket 2003–NM–05–AD.

Applicability: Model 747 series airplanes, certificated in any category, as listed in Boeing Alert Service Bulletin 747–29A2102, dated June 29, 2000.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an

alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent leakage of hydraulic (flammable) fluid into an engine fire, which could result in an uncontrolled fire, accomplish the following:

Part Identification

(a) Within 6 months after the effective date of this AD, check maintenance records or perform a general visual inspection of each engine strut to determine whether any discrepant valve is installed as a hydraulic supply (fire) shutoff valve for the engine-driven pump. A discrepant valve is a Circle Seal valve part number (P/N) S270T010–3 or a valve that cannot be readily identified. Identify the part in accordance with Boeing Alert Service Bulletin 747–29A2102, dated June 29, 2000. If no discrepant valve is installed, no further work is required by this paragraph.

Note 2: For the purposes of this AD, a general visual inspection is defined as: ''A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked.''

Corrective Actions for Discrepant Valves

(b) For any discrepant valve found during the part identification required by paragraph (a) of this AD:

(1) Within 6 months after the effective date of this AD, do a hydraulic supply (fire) shutoff valve test, in accordance with paragraph 3.J. of the Accomplishment Instructions of Boeing Alert Service Bulletin 747–29A2102, dated June 29, 2000.

(i) If the valve passes the test, repeat the test in accordance with paragraph (b)(2) of this AD.

(ii) If the valve does not pass the test: Before further flight, replace the valve with a serviceable valve, P/N S270T010–3, 10–3200–1, 10–3200–2, or a valve identified in paragraph 3.I. of the Accomplishment Instructions of the service bulletin; and do a hydraulic supply (fire) shutoff valve test; in accordance with the Accomplishment Instructions of the service bulletin. Replacement with a serviceable valve, P/N 10–3200–1, 10–3200–2, or a valve identified in paragraph 3.I. of the Accomplishment Instructions of the service bulletin, terminates the repetitive tests required by paragraph (b)(2) of this AD for that valve. If a P/N S270T010–3 valve is installed as a replacement, repeated testing must be performed per paragraph 3.J. of the Accomplishment Instructions of the service bulletin in accordance with paragraph (b)(2) of this AD.

(2) Repeat the test specified in paragraph (b)(1) of this AD on each discrepant valve at intervals not to exceed 6 months, until the actions specified by paragraph (b)(3) of this AD have been accomplished.

(3) Within 4 years after identifying the valve as required by paragraph (a) of this AD: Replace each discrepant valve with a serviceable valve, P/N 10–3200–1, 10–3200–2, or a valve identified in paragraph 3.I. of the Accomplishment Instructions of the service bulletin, and do a hydraulic supply (fire) shutoff valve test, in accordance with the Accomplishment Instructions of the service bulletin. Replacement with a serviceable valve, P/N 10–3200–1, 10–3200–2, or a valve identified in paragraph 3.I. of the Accomplishment Instructions of the service bulletin terminates the repetitive tests required by paragraph (b)(2) of this AD for that valve.

Part Installation

(c) As of the effective date of this AD, no person may install a Circle Seal valve P/N S270T010–3 on any airplane unless the requirements of this AD are accomplished for that valve.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) Unless otherwise specified in this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin 747–29A2102, dated June 29, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124–2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(g) This amendment becomes effective on February 11, 2004.

Issued in Renton, Washington, on December 23, 2003.

Ali Bahrami,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 04–32 Filed 1–6–04; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001–NM–374–AD; Amendment 39–13411; AD 2003–26–12]

RIN 2120–AA64

Airworthiness Directives; Boeing Model 737–600, 737–700, 737–800, 757–200, and 757–300 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 737–600, 737–700, 737–800, 757–200, and 757–300 series airplanes, that requires replacing existing video distribution unit (VDU) connectors with new, improved connectors or new wire assemblies (jumpers), and performing related actions, as applicable. This action is necessary to prevent a short circuit in a VDU connector and consequent arcing and damage to wiring within the connector, which could result in damage to adjacent systems or structure and possible smoke or fire in the airplane cabin. This action is intended to address the identified unsafe condition.

DATES: Effective February 11, 2004.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of February 11, 2004.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124–2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Binh V. Tran, Aerospace Engineer, Systems and Equipment Branch, ANM–130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton,